06-26-2026, 01:52 PM ‘SlideRule’

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Abstract - Based on questionnaires completed by freshman engineering students at Purdue, data are presented concerning ownership of calculators, slide rules, and typewriters, and their perceived value to their owners.

In the last class meeting of Engineering 100 (Freshman Lectures), Purdue students were asked to complete a two-page questionnaire concerning their feelings about the Freshman Engineering program and a variety of related aspects. The current questionnaire (Fall 1974), provided the opportunity to gather some data concerning the use of the new electronic pocket calculators, slide rules, and typewriters. Of particular interest to faculty and staff is the extent to which the calculators have replaced slide rules in the students' academic environment. …

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This report seeks to reflect upon their responses in a manner which will indicate the popularity and usefulness of these machines. We were able to determine the perceived value of these instruments to the students who owned them, as well as the value to those who did not own a calculator, slide rule, or typewriter. By asking the respondents to indicate the model of each of the instruments they owned, we were able to obtain data as to the more popular models in each field.

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I. RESULTS REGARDING HAND CALCULATORS

With over 12 million sold in the U.S. last year, the electronic pocket calculator is quickly replacing the slide rule on the engineering student's belt. Approximately 86% of the 911 students indicating that they owned or had available to them a hand calculator indicated the model. The most popular models of calculators were those distributed by Texas Instrument Corporation (SR-50, 24%; Sr-10, 13%; SR-1 1, 7%), the Hewlett-Packard series (HP-45, 8%; and HP-35, 6%), Sears (4%), Bowmar Brain (3%), Commodore SR-1400 (2%), and Casio (3%). These models of calculators accounted for 84% of the models which were listed, and 72% of the respondents who indicated they owned or had one available.

The Purdue freshman engineer has locally available to him electronic calculators as expensive as $800 and as inexpensive as $20. Among the 788 students listed the model of their calculator, 659 accounted for the nine most popular (listed over 15 times). Table 1 illustrates the breakdown of these totals.

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II. RESULTS REGARDING SLIDE RULES

Slide rules, as Table 4 indicates, have been surpassed by the hand calculator in terms of their perceived usefulness to their owners. Nevertheless, 92% or 989 of the 1077 respondents indicated that they owned or had available to them a slide rule. …

TABLE 1
MOST COMMONLY USED HAND CALCULATORS

Model	Percentage of Whole	Cumulative Percent	Actual No.
SR-50	24	24	218
SR-10	13	37	122
SR-11	7	44	67
HP-45	8	52	75
HP-35	6	58	59
Sears	4	62	39
Bowmar Brain	3	65	30
Commodore SR-1400	2	67	23
Casio	3	70	26
Miscellaneous	14	84	129
No Model Listed	13	97	123
		TOTAL	911

TABLE 4*

VALUE OF CALCULATORS, SLIDE RULES, AND TYPEWRITERS TO OWNERS AND TO NON-OWNERS

	Do You Own One?			How Valuable to Engineering Freshman?		
Instrument	?	(No.)	Percent	Essential to Very Valuable	Valuable	Little or No Value
Calculator	Yes	(896)	85%	92%	7%	1%
	No	(162)	15%	80%	17%	3%
Slide Rule	Yes	(955)	92%	43%	26%	32%
	No	(81)	8%	20%	36%	45%
Typewriter	Yes	(739)	74%	41%	39%	20%
	No	(261)	26%	23%	38%	40%